OIPE

```
              RAW SEQUENCE LISTING                    DATE: 08/23/2001
              PATENT APPLICATION:   US/09/929,266     TIME: 17:10:23

              Input Set : A:\W108365.txt
              Output Set: N:\CRF3\08162001\I929266.raw
```

```
      4 <110> APPLICANT: Brian T. Chait
      5         Darin R. Latimer
      6         Paul M. Lizardi
      7         Eric R. Kershnar
      8         Jon S. Morrow
      9         Matthew E. Roth
     10         Martin J. Mattessich
     11         Kevin J. McConnell
     13 <120> TITLE OF INVENTION: ULTRA-SENSITIVE DETECTION SYSTEMS
     16 <130> FILE REFERENCE: 01173.0003U2
C--> 18 <140> CURRENT APPLICATION NUMBER: US/09/929,266
C--> 18 <141> CURRENT FILING DATE: 2001-08-13
     18 <150> PRIOR APPLICATION NUMBER: 60/224,939
     19 <151> PRIOR FILING DATE: 2000-08-11
     21 <150> PRIOR APPLICATION NUMBER: 60/283,498
     22 <151> PRIOR FILING DATE: 2000-04-12
     24 <160> NUMBER OF SEQ ID NOS: 33
     26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     28 <210> SEQ ID NO: 1
     29 <211> LENGTH: 12
     30 <212> TYPE: PRT
     31 <213> ORGANISM: Artificial Sequence
     33 <220> FEATURE:
     34 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
     35         construct
     37 <400> SEQUENCE: 1
     38 Cys Gly Gly Gly Gly Asp Pro Gly Gly Gly Gly Arg
     39  1               5                  10
     41 <210> SEQ ID NO: 2
     42 <211> LENGTH: 11
     43 <212> TYPE: PRT
     44 <213> ORGANISM: Artificial Sequence
     46 <220> FEATURE:
     47 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
     48         construct
     50 <400> SEQUENCE: 2
     51 Ala Gly Ser Leu Asp Pro Ala Gly Ser Leu Arg
     52  1               5                  10
     54 <210> SEQ ID NO: 3
     55 <211> LENGTH: 13
     56 <212> TYPE: PRT
     57 <213> ORGANISM: Artificial Sequence
     59 <220> FEATURE:
     60 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
     61         construct
     63 <400> SEQUENCE: 3
     64 Ala Gly Ser Met Leu Asp Pro Ala Gly Ser Met Leu Arg
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/929,266

DATE: 08/23/2001
TIME: 17:10:23

Input Set : A:\W108365.txt
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```
65  1                5                    10
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 11
69 <212> TYPE: PRT
70 <213> ORGANISM: Artificial Sequence
72 <220> FEATURE:
73 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
74        construct
76 <400> SEQUENCE: 4
77 Ala Gly Ser Leu Ala Asp Pro Gly Ser Leu Arg
78  1                5                    10
80 <210> SEQ ID NO: 5
81 <211> LENGTH: 11
82 <212> TYPE: PRT
83 <213> ORGANISM: Artificial Sequence
85 <220> FEATURE:
86 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
87        construct
89 <400> SEQUENCE: 5
90 Ala Leu Ser Leu Ala Asp Pro Gly Ser Gly Arg
91  1                5                    10
93 <210> SEQ ID NO: 6
94 <211> LENGTH: 11
95 <212> TYPE: PRT
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
100        . construct
102 <400> SEQUENCE: 6
103 Ala Leu Ser Leu Gly Asp Pro Ala Ser Gly Arg
104  1                5                    10
106 <210> SEQ ID NO: 7
107 <211> LENGTH: 11
108 <212> TYPE: PRT
109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
113        construct
115 <400> SEQUENCE: 7
116 Ala Gly Ser Asp Pro Leu Ala Gly Ser Leu Arg
117  1                5                    10
119 <210> SEQ ID NO: 8
120 <211> LENGTH: 11
121 <212> TYPE: PRT
122 <213> ORGANISM: Artificial Sequence
124 <220> FEATURE:
125 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
126        construct
128 <400> SEQUENCE: 8
```

```
129 Ala Asp Pro Gly Ser Leu Ala Gly Ser Leu Arg
130   1           5                   10
132 <210> SEQ ID NO: 9
133 <211> LENGTH: 357
134 <212> TYPE: PRT
135 <213> ORGANISM: Homo sapiens
137 <400> SEQUENCE: 9
138 Met Ser Ala Ile Gln Ala Ala Trp Pro Ser Gly Thr Glu Cys Ile Ala
139   1           5                   10                  15
140 Lys Tyr Asn Phe His Gly Thr Ala Glu Gln Asp Leu Pro Phe Cys Lys
141               20                  25                  30
142 Gly Asp Val Leu Thr Ile Val Ala Val Thr Lys Asp Pro Asn Trp Tyr
143               35                  40                  45
144 Lys Ala Lys Asn Lys Val Gly Arg Glu Gly Ile Ile Pro Ala Asn Tyr
145         50                  55                  60
146 Val Gln Lys Arg Glu Gly Val Lys Ala Gly Thr Lys Leu Ser Leu Met
147 65                  70                  75                  80
148 Pro Trp Phe His Gly Lys Ile Thr Arg Glu Gln Ala Glu Arg Leu Leu
149               85                  90                  95
150 Tyr Pro Pro Glu Thr Gly Leu Phe Leu Val Arg Glu Ser Thr Asn Tyr
151               100                 105                 110
152 Pro Gly Asp Tyr Thr Leu Cys Val Ser Cys Asp Gly Lys Val Glu His
153         115                 120                 125
154 Tyr Arg Ile Met Tyr His Ala Ser Lys Leu Ser Ile Asp Glu Glu Val
155         130                 135                 140
156 Tyr Phe Glu Asn Leu Met Gln Leu Val Glu His Tyr Thr Ser Asp Ala
157 145                 150                 155                 160
158 Asp Gly Leu Cys Thr Arg Leu Ile Lys Pro Lys Val Met Glu Gly Thr
159               165                 170                 175
160 Val Ala Ala Gln Asp Glu Phe Tyr Arg Ser Gly Trp Ala Leu Asn Met
161               180                 185                 190
162 Lys Glu Leu Lys Leu Leu Gln Thr Ile Gly Lys Gly Glu Phe Gly Asp
163             195                 200                 205
164 Val Met Leu Gly Asp Tyr Arg Gly Asn Lys Val Ala Val Lys Cys Ile
165       210                 215                 220
166 Lys Asn Asp Ala Thr Ala Gln Ala Phe Leu Ala Glu Ala Ser Val Met
167 225                 230                 235                 240
168 Thr Gln Leu Arg His Ser Asn Leu Val Gln Leu Leu Gly Val Ile Val
169               245                 250                 255
170 Glu Glu Lys Gly Gly Leu Tyr Ile Val Thr Glu Tyr Met Ala Lys Gly
171             260                 265                 270
172 Ser Leu Val Asp Tyr Leu Arg Ser Arg Gly Arg Ser Val Leu Gly Gly
173         275                 280                 285
174 Asp Cys Leu Leu Lys Phe Ser Leu Asp Val Cys Glu Ala Met Glu Tyr
175       290                 295                 300
176 Leu Glu Gly Asn Asn Phe Val His Arg Asp Leu Ala Ala Arg Asn Val
177 305                 310                 315                 320
178 Leu Val Ser Glu Asp Asn Val Ala Lys Val Ser Asp Phe Gly Leu Thr
179               325                 330                 335
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/929,266

DATE: 08/23/2001
TIME: 17:10:23

Input Set : A:\W108365.txt
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```
180 Lys Glu Ala Ser Thr Pro Arg Thr Arg Ala Ser Cys Gln Ser Ser Gly
181             340             345             350
182 Gln Pro Leu Arg Pro
183             355
185 <210> SEQ ID NO: 10
186 <211> LENGTH: 536
187 <212> TYPE: PRT
188 <213> ORGANISM: Homo sapiens
190 <400> SEQUENCE: 10
191 Met Gly Ser Asn Lys Ser Lys Pro Lys Asp Ala Ser Gln Arg Arg Arg
192 1               5               10              15
193 Ser Leu Glu Pro Ala Glu Asn Val His Gly Ala Gly Gly Gly Ala Phe
194             20              25              30
195 Pro Ala Ser Gln Thr Pro Ser Lys Pro Ala Ser Ala Asp Gly His Arg
196             35              40              45
197 Gly Pro Ser Ala Ala Phe Ala Pro Ala Ala Ala Glu Pro Lys Leu Phe
198     50              55              60
199 Gly Gly Phe Asn Ser Ser Asp Thr Val Thr Ser Pro Gln Arg Ala Gly
200 65              70              75              80
201 Pro Leu Ala Gly Gly Val Thr Thr Phe Val Ala Leu Tyr Asp Tyr Glu
202             85              90              95
203 Ser Arg Thr Glu Thr Asp Leu Ser Phe Lys Lys Gly Glu Arg Leu Gln
204             100             105             110
205 Ile Val Asn Asn Thr Glu Gly Asp Trp Trp Leu Ala His Ser Leu Ser
206             115             120             125
207 Thr Gly Gln Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Ser Asp
208     130             135             140
209 Ser Ile Gln Ala Glu Glu Trp Tyr Phe Gly Lys Ile Thr Arg Arg Glu
210 145             150             155             160
211 Ser Glu Arg Leu Leu Leu Asn Ala Glu Asn Pro Arg Gly Thr Phe Leu
212             165             170             175
213 Val Arg Glu Ser Glu Thr Thr Lys Gly Ala Tyr Cys Leu Ser Val Ser
214             180             185             190
215 Asp Phe Asp Asn Ala Lys Gly Leu Asn Val Lys His Tyr Lys Ile Arg
216             195             200             205
217 Lys Leu Asp Ser Gly Gly Phe Tyr Ile Thr Ser Arg Thr Gln Phe Asn
218     210             215             220
219 Ser Leu Gln Gln Leu Val Ala Tyr Tyr Ser Lys His Ala Asp Gly Leu
220 225             230             235             240
221 Cys His Arg Leu Thr Thr Val Cys Pro Thr Ser Lys Pro Gln Thr Gln
222             245             250             255
223 Gly Leu Ala Lys Asp Ala Trp Glu Ile Pro Arg Glu Ser Leu Arg Leu
224             260             265             270
225 Glu Val Lys Leu Gly Gln Gly Cys Phe Gly Glu Val Trp Met Gly Thr
226             275             280             285
227 Trp Asn Gly Thr Thr Arg Val Ala Ile Lys Thr Leu Lys Pro Gly Thr
228     290             295             300
229 Met Ser Pro Glu Ala Phe Leu Gln Glu Ala Gln Val Met Lys Lys Leu
230 305             310             315             320
```

RAW SEQUENCE LISTING   DATE: 08/23/2001
PATENT APPLICATION: US/09/929,266   TIME: 17:10:23

Input Set : A:\W108365.txt
Output Set: N:\CRF3\08162001\I929266.raw

```
231 Arg His Glu Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu Pro
232                 325             330             335
233 Ile Tyr Ile Val Thr Glu Tyr Met Ser Lys Gly Ser Leu Leu Asp Phe
234                 340             345             350
235 Leu Lys Gly Glu Thr Gly Lys Tyr Leu Arg Leu Pro Gln Leu Val Asp
236         355             360             365
237 Met Ala Ala Gln Ile Ala Ser Gly Met Ala Tyr Val Glu Arg Met Asn
238     370             375             380
239 Tyr Val His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Gly Glu Asn
240 385             390             395             400
241 Leu Val Cys Lys Val Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu Asp
242             405             410             415
243 Asn Glu Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp Thr
244             420             425             430
245 Ala Pro Glu Ala Ala Leu Tyr Gly Arg Phe Thr Ile Lys Ser Asp Val
246         435             440             445
247 Trp Ser Phe Gly Ile Leu Leu Thr Glu Leu Thr Thr Lys Gly Arg Val
248         450             455             460
249 Pro Tyr Pro Gly Met Val Asn Arg Glu Val Leu Asp Gln Val Glu Arg
250 465             470             475             480
251 Gly Tyr Arg Met Pro Cys Pro Pro Glu Cys Pro Glu Ser Leu His Asp
252             485             490             495
253 Leu Met Cys Gln Cys Trp Arg Lys Glu Pro Glu Glu Arg Pro Thr Phe
254         500             505             510
255 Glu Tyr Leu Gln Ala Phe Leu Glu Asp Tyr Phe Thr Ser Thr Glu Pro
256         515             520             525
257 Gln Tyr Gln Pro Gly Glu Asn Leu
258     530             535
260 <210> SEQ ID NO: 11
261 <211> LENGTH: 13
262 <212> TYPE: PRT
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
267       construct
269 <400> SEQUENCE: 11
270 Cys Gly Ala Gly Ser Asp Pro Leu Ala Gly Ser Leu Arg
271 1               5               10
273 <210> SEQ ID NO: 12
274 <211> LENGTH: 10
275 <212> TYPE: PRT
276 <213> ORGANISM: Artificial Sequence
278 <220> FEATURE:
279 <223> OTHER INFORMATION: Description of Artificial Sequence; Note=synthetic
280       construct
282 <400> SEQUENCE: 12
283 Gly Ser Trp Phe Ser Gly Met Cys Ala Arg
284 1               5               10
286 <210> SEQ ID NO: 13
```

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
<223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/929,266

DATE: 08/23/2001
TIME: 17:10:24

Input Set : A:\W108365.txt
Output Set: N:\CRF3\08162001\I929266.raw

```
L:18  M:270 C: Current Application Number differs, Replaced Current Application No
L:18  M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:440 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:478 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
```